

SEQUENCE LISTING

<110> Fronticelli, Clara

<120> Polymeric Hemoglobin Mutants

<130> 6056-279 PC

<140> PCT/US99/22756

<141> 2000-05-01

<150> 60/102,640

<151> 1998-10-01

<160> 12

<170> FastSEQ for Windows Version 4.0

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<211> 438

<212> DNA

<213> Human

<400> 1

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aaggctcatg gcaagaaagt gctcggtgcc tttagtgatg gcctggctca cctggacaac 240
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gagaacttca ggctcctggg caacgtgctg gtctgtgtgc tggcccatca ctttggcaaa 360
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<210> 2

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<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mutant Of
Human Beta-globin

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gagaacttca ggctcctggg caacgtgctg gtcggtgtgc tggcccatca ctttggcaaa 360
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 Lys Val Asn Val Asp Glu Val Gly Gly Glu Ala Leu Gly Arg Leu Leu
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 Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Glu Ser Phe Gly Asp Leu
 35 40 45
 Ser Thr Pro Asp Ala Val Met Gly Asn Pro Lys Val Lys Ala His Gly
 50 55 60
 Lys Lys Val Leu Gly Ala Phe Ser Asp Gly Leu Ala His Leu Asp Asn
 65 70 75 80
 Leu Lys Gly Thr Phe Ala Thr Leu Ser Glu Leu His Cys Asp Lys Leu
 85 90 95
 His Val Asp Pro Glu Asn Phe Arg Leu Leu Gly Asn Val Leu Val Cys
 100 105 110
 Val Leu Ala His His Phe Gly Lys Glu Phe Thr Pro Pro Val Gln Ala
 115 120 125
 Ala Tyr Gln Lys Val Val Ala Gly Val Ala Asn Ala Leu Ala His Lys
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 Tyr His
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<210> 4
 <211> 146
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Mutant of
 Human beta-globin

<400> 4
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 1 5 10 15
 Lys Val Asn Val Asp Glu Val Gly Gly Glu Ala Leu Gly Arg Leu Leu
 20 25 30
 Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Glu Ser Phe Gly Asp Leu
 35 40 45
 Ser Thr Pro Asp Ala Val Met Gly Asn Pro Lys Val Lys Ala His Gly
 50 55 60
 Lys Lys Val Leu Gly Ala Phe Ser Asp Gly Leu Ala His Leu Asp Asn
 65 70 75 80
 Leu Lys Gly Thr Phe Ala Thr Leu Ser Glu Leu His Ala Asp Lys Leu
 85 90 95
 His Val Asp Pro Glu Asn Phe Arg Leu Leu Gly Asn Val Leu Val Gly
 100 105 110
 Val Leu Ala His His Phe Gly Lys Glu Phe Thr Pro Pro Val Gln Ala
 115 120 125
 Ala Tyr Gln Lys Val Val Ala Gly Val Ala Asn Ala Leu Ala His Lys

Leu Pro Ala Glu Phe Thr Pro Ala Val His Ala Ser Leu Asp Lys Phe
 115 120 125
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<210> 7
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Mutant of
 Human alpha-globin

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 aaggtggcgc acgcgctgac caacgccgtg gcgcacgtgg acgacatgcc caacgcgctg 240
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 ctaagccact cctgctggt gaccctggcc gccacctcc ccgccgagtt caccctgctg 360
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<210> 8
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 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Factor Xa
 recognition sequence

<400> 8
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 <212> DNA
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<220>
 <223> Description of Artificial Sequence: Mutagenizing
 oligonucleotide for human beta-globin Ser9-Cys
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<400> 9
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<210> 10
 <211> 27
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mutagenizing oligonucleotide for human beta-globin Cys93-Ala mutation

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<210> 11

<211> 18

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Mutagenizing oligonucleotide for human beta-globin Cys112-Gly mutation

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18

<210> 12

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<212> DNA

<213> Human

<400> 12

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ctaagccact	gcctgctggg	gaccttggcc	gccacctcc	ccgccgagtt	caccctgcg	360
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cgt						423